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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/021,088	12/19/2001	Mitsugu Kamizuru	35.C16071	8751

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EXAMINER

TAWFIK, SAMEH

ART UNIT	PAPER NUMBER
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3721

DATE MAILED: 11/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/021,088

Applicant(s)

KAMIZURU ET AL.

Examiner

Sameh H. Tawfik

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☒ Claim(s) 4-6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claims 4-6 are objected to because of the following informalities:

(claim 4, line 3) delete "foldable" after "the" and instead insert --folding--;

(claim 5, line 2) delete "a" after "at" and instead insert ---one of said--;

(claims 5 and 6, line 2) delete "portion" and instead insert --portions--; etc.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Click (3,576,051).

Click a pair of folding rollers (Figs. 2 and 4; via folding rollers 21 and 22), wherein at least one of the pair of folding rollers has a single larger diameter portion (Fig. 4, via the center part of roller 21) and small diameter portions at both sides of the large diameter portion (Figs. 2 and 4, via 28), and the large diameter portion is provided within a convey range in a sheet width direction of a minimum size sheet foldable in the sheet folding apparatus (Fig. 4). Note that the limitations of "a sheet folding apparatus for folding a sheet by nipping and conveying the sheet" were not patentably weighted because there is no positive structure were sited in the body of the claim for nipping and conveying by a folding rollers in folding apparatus.

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Regarding claim 2: wherein the large diameter portion is provided at a sheet convey center portion of the roller (Fig. 4).

Regarding claim 3: wherein a width of the single large diameter portion in the axis direction is substantially $\frac{1}{2}$ of a minimum width of a sheet size folded in the sheet folding apparatus (Fig. 4).

Regarding claim 4: wherein the single large diameter portion of the roller is provided outside a width of a maximum size sheet foldable in the apparatus (Fig. 4).

Regarding claims 5 and 6: wherein a predetermined gap is formed at a small diameter portion between the pair of folding rollers (Figs. 2 and 4).

Regarding claims 7 and 8: wherein the predetermined gap formed between the pair of folding rollers is set smaller than a thickness of three sheets conveyed (Figs. 2 and 3; column 1, lines 19-26).

Regarding claim 9: wherein the single large diameter portion has a taper section (Figs. 2 and 4).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7, 8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Click (3,576,051) in view of Branecky et al. (5,180,151).

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Click does not disclose that the predetermined gap formed between the pair of folding rollers is set smaller than a thickness of three sheets conveyed. However, Branecky discloses a similar sheet folding apparatus comprising that the predetermined gap formed between the pair of folding rollers is set smaller than a thickness of three sheets conveyed (Figs. 2 and 3; column 1, lines 19-26).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Click's sheet folding apparatus by having the predetermined gap formed between the pair of folding rollers is set smaller than a thickness of three sheets conveyed, as suggested by Branecky, in order to fold one or more sheets of paper at the same time to speed up the process of folding (column 1, lines 49 and 50).

Regarding claim 10: Click discloses that the single large diameter portion has a taper section (Figs. 2 and 4).

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takehara et al. (6,290,220) in view of Click (3,576,051).

Takehara discloses an image forming apparatus having image forming means for forming an image on a sheet and a sheet conveying means for conveying the sheet on which the image is formed by the image forming means, see for example (Figs. 1-5 and abstract). Takehara does not disclose sheet folding processing means for folding the conveyed sheet including a sheet folding apparatus according to claim 1. However, Click discloses a sheet folding processing means for folding the conveyed sheet including a sheet folding apparatus according to claim 1, as set forth in the action.

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Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Takehara's image forming apparatus by having a sheet folding processing means for folding the conveyed sheet including a sheet folding apparatus according to claim 1, as suggested by Click, in order to improve the image forming apparatus by adding folding station to fold and flattening sheets (column 1, lines 58-66).

Response to Arguments

Applicant's arguments with respect to claims 1-11 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sameh H. Tawfik whose telephone number is (703) 308-2809. The examiner can normally be reached on Tuesday - Friday from 8:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rinaldi Rada can be reached on (703) 308-2187. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3579 for regular communications and (703) 308-7769 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.

ST.

November 17, 2003



Mickey Yu
Supervisory Patent Examiner
Group 3700